

CLAIMS

1. A process for producing an SOI wafer in which an ion implantation layer is formed via an insulating film on a wafer that is to be used as an active layer by
5 implanting ions of hydrogen or a rare gas element, the wafer for the active layer is then bonded via an insulating film on a base wafer so as to form a bonded wafer, and the bonded wafer is then heat processed and is cleaved with the ion implantation layer taken as a boundary, wherein

after the SOI wafer has been formed by heat processing the bonded wafer and
10 then cleaving it off taking the ion implantation layer as a boundary, oxidization processing is performed on the SOI wafer so that an oxide film having a predetermined thickness is formed on the surface of the SOI layer, this oxide film is then removed, and the SOI wafer is subsequently heat treated in an inert gas atmosphere.

15 2. The process for producing an SOI wafer according to claim 1, wherein, in the heat processing in the inert gas atmosphere, the SOI wafer is held for approximately three hours or more at a temperature of 1100 °C or more in an argon gas atmosphere.

3. The process for producing an SOI wafer according to claim 1, wherein the
20 oxidization processing is performed at a temperature of 600 °C to 1000 °C.

4. The process for producing an SOI wafer according to claim 1, wherein the oxide film has a thickness of 4000 Å.